

Remarks

The Applicants note with appreciation the allowance of Claim 6. Claim 6 has been rewritten into independent form and the Applicants respectfully submit that it is in proper form for allowance.

The Applicants acknowledge the rejection of Claims 19 and 23 under 35 U.S.C. §112. The Applicants respectfully submit that, subsequent to careful examination, the Applicants believe that the claims are not duplicates, inasmuch as Claim 23 specifies that the acceptable additive is an oxidizing agent, whereas Claim 19 does not. Thus, the Applicants respectfully submit that they are not duplicates. In any event, the Applicants have amended Claim 23 to recite that the acceptable additive is in fact present (as opposed to Claim 19, where it is optional) and that the acceptable additive is an oxidizing agent. Withdrawal of the §112 rejection is respectfully requested.

Inasmuch as Claims 20 – 22 are similar to Claim 23, they have also been rewritten. Consideration on the merits is respectfully requested.

The Applicants acknowledge the rejection of Claims 1 – 5 and 7 – 23 under 35 U.S.C. §103 over Patil. The Applicants note with appreciation the Examiner's helpful comments concerning the hypothetical application of Patil to those claims. Nonetheless, the Applicants respectfully submit that Claims 1 – 5 and 7 – 23 are patentable over Patil for the reasons set forth in detail below.

The rejection takes the position that Patil discloses biodegradable materials and articles formulated from a polymer and cereal grain flour as supported by the Abstract and the Examples. The rejection further states that the only difference between the claims and Patil is the average granulometry, which is not identified as being between 10 and 2000 μm . The Applicants agree that Patil fails to disclose the average granulometry between 10 and 2000 μm . Moreover, the Applicants respectfully submit that there are no teachings or suggestions as to what the granulometry should be, much less provide teachings or suggestions concerning the claimed amount of 10 – 2000 μm .

Careful scrutiny of the entire Patil disclosure reveals that there is utterly no disclosure on this point at all. While it is true that Patil mentions granules, such mention is not really even in context with the product of the Patil invention. For example, as disclosed in Column 4, beginning at about line 17, Patil states that cereal flour is composed of 80% granular, unmodified starch and further discloses starch granules present in a dry-milled sample of cereal flour and starch granules isolated and purified by well known by wet-milling processes. However, that reference to granules is not in the context of the Patil invention. It is merely a reference to granules of well known prior art cereals. The Applicants therefore respectfully submit that Patil is actually non-enabling with respect to the size of granules, much less the Applicants' claimed size of granules of between 10 and 2000 μm . Thus, the Applicants respectfully submit that Patil is inapplicable to all of the rejected claims, with the exception of Claims 15 – 21 on this basis.

In any event, all of the Applicants' rejected claims specifically recite a mixture of at least one polymer and at least one cereal grain flour. This is sharply contrasted to Patil, which discloses grafted co-polymers. The flour-poly(methyl acrylate) is a graft co-polymer. This is readily seen by reference to Column 3 of Patil, for example, which specifically states that flour-based films are prepared by graft polymerizing methyl acrylate onto flour. The result, as noted above, is a graft co-polymer. However, that is not a mixture as the Applicants specifically claim.

The graft polymerization of Patil means that functional groups of the methyl acrylate monomers interact with functional groups in the flour which can be functional groups of the starch, proteins or other components present in the flour. That interaction creates bonds between the methyl acrylate monomers and the flour components. This is sharply contrasted to the biodegradable material recited in Claims 1 – 5 and 7 – 23, wherein the polymer does not react with the components of the flour and, to avoid such an interaction, the polymer is not chemically modified and does not

have functional groups which react with hydroxyl groups of starch or proteins in the cereal grain flour.

Moreover, the Patil disclosure refers to various types of treatments that may be applied to the cereal flour. For example, reference to Example 1 of Patil in Column 5 at about line 33 refers to the gelatinization of the starch component of the flour. The Applicants' rejected claims do not do this. This is specifically recited in Claim 1, for example, which states that it is "not subject to treatment." This can be seen in better context in the Applicants' Specification, on page 4 in the third full paragraph, wherein the Applicants teach that, in addition, the cereal grain flours are not subjected to any treatment such as, for example, gelatinization or destructuring or surface modification of the starches. This is clearly one of the teachings of Patil, wherein such treatments are possible. In any event, the Applicants specifically claim a mixture of at least one polymer with at least one cereal grain flour, while Patil produces a flour-poly(methyl acrylate) graft polymer. The actual chemical reaction to form a graft co-polymer is sharply different from a mixture of two components. Thus, the Applicants respectfully submit that Patil is inapplicable to Claims 1 – 5 and 7 – 23. Withdrawal of the rejection is respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,



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